

2. The method of claim 1, further comprising at least one power ring and one ground ring on one of said connective trace layers, said at least one power ring and one ground ring respectively connecting to said power plane and ground plane.

3. The method of claim 1, further comprising filling another capacitor dielectric material into said via holes to form capacitors with different capacitance.

REMARKS

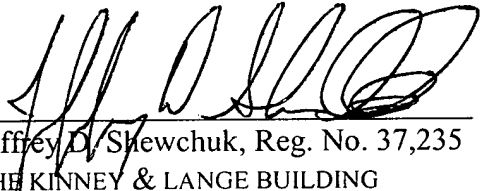
It is respectfully requested that the above amendments be made prior to calculating the filing fee. In this Preliminary Amendment, the claims are amended to correct typographical and grammatical errors, and the specification is amended to include a claim to priority under 35 U.S.C. §120 based on parent Application Serial No. 09/571,242. The Examiner is invited to contact the undersigned attorney at the number listed below if such a call would in any way facilitate examination of the application.

Respectfully submitted,

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By


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[illegible]

1. (Amended) A method of manufacturing built-in capacitors in [the] a multi-layer substrate, said method comprising:

filling a capacitor dielectric material into a portion of said via holes, which are predetermined design as capacitors, said capacitor dielectric material having a dielectric constant substantially higher than said second dielectric layer;

masking a dry film on areas of said second conductive layers where those are desired regions to form a copper layer thereon;

etching away exposed regions of said second conductive layers so as to form
ground plane and power plane;

removing said dry film;

electroplating two copper layers respectively on said ground plane and power plane to seal said copper dielectric material to form built-in capacitors;

assembling and sintering said first conductive layer[/], said first dielectric layer[/], said ground plane[/], said second dielectric layer[/], said

$\{x_{ij}^{(k)}\}$, $\{y_{ij}^{(k)}\}$, $\{z_{ij}^{(k)}\}$, $\{w_{ij}^{(k)}\}$, $\{v_{ij}^{(k)}\}$, $\{u_{ij}^{(k)}\}$, $\{t_{ij}^{(k)}\}$, $\{s_{ij}^{(k)}\}$, $\{r_{ij}^{(k)}\}$, $\{q_{ij}^{(k)}\}$, $\{p_{ij}^{(k)}\}$, $\{o_{ij}^{(k)}\}$, $\{n_{ij}^{(k)}\}$, $\{m_{ij}^{(k)}\}$, $\{l_{ij}^{(k)}\}$, $\{k_{ij}^{(k)}\}$, $\{j_{ij}^{(k)}\}$, $\{i_{ij}^{(k)}\}$, $\{h_{ij}^{(k)}\}$, $\{g_{ij}^{(k)}\}$, $\{f_{ij}^{(k)}\}$, $\{e_{ij}^{(k)}\}$, $\{d_{ij}^{(k)}\}$, $\{c_{ij}^{(k)}\}$, $\{b_{ij}^{(k)}\}$, $\{a_{ij}^{(k)}\}$, $\{x_{ij}^{(k+1)}\}$, $\{y_{ij}^{(k+1)}\}$, $\{z_{ij}^{(k+1)}\}$, $\{w_{ij}^{(k+1)}\}$, $\{v_{ij}^{(k+1)}\}$, $\{u_{ij}^{(k+1)}\}$, $\{t_{ij}^{(k+1)}\}$, $\{s_{ij}^{(k+1)}\}$, $\{r_{ij}^{(k+1)}\}$, $\{q_{ij}^{(k+1)}\}$, $\{p_{ij}^{(k+1)}\}$, $\{o_{ij}^{(k+1)}\}$, $\{n_{ij}^{(k+1)}\}$, $\{m_{ij}^{(k+1)}\}$, $\{l_{ij}^{(k+1)}\}$, $\{k_{ij}^{(k+1)}\}$, $\{j_{ij}^{(k+1)}\}$, $\{i_{ij}^{(k+1)}\}$, $\{h_{ij}^{(k+1)}\}$, $\{g_{ij}^{(k+1)}\}$, $\{f_{ij}^{(k+1)}\}$, $\{e_{ij}^{(k+1)}\}$, $\{d_{ij}^{(k+1)}\}$, $\{c_{ij}^{(k+1)}\}$, $\{b_{ij}^{(k+1)}\}$, $\{a_{ij}^{(k+1)}\}$.